# Thermal Printer
# User Manual

Document Title: Thermal Printer User Manual.

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Author: Sham Kumar V H

Technical Support E-mail: support@coineltech.com

Technical Discussion Forum: www.coineltech.com/forums

## Company Contact Information

CoiNel Technology Solutions LLP No-32,
2nd Floor,
HAPBCO Tower,
RPC Layout, Hampinagar, Bangalore-
560104

Ph: 080-23154423

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## 1. BOARD FEATURES:

The thermal printer has the following features

1. Interface: UART, RS232 or TTL Connection Out.
2. Baud rate can be changed. (From 1200 to 115200)
3. Images print Support. (As per user configuration through UART only).
4. 3 Fonts Support
   2 English fonts (Fixedsys and Courier)
   Regional Language font – Hindi (Kannada/Telugu/Guajarati as per the customer requirement)
5. Text File (.txt) content Print Support.
6. Bar Code Support Max length of 11 values (Includes alphabets and numbers)
7. Paper feed switch and Test print Switch is given in the onboard.
8. Power: 12V/3A (Product Code) / 7.5V/3A (Product Code) / 5V/3A (Product Code) Powered via adapter or variable power supply.
9. Supported Printer:
   a. 2 inch --- FUJITSU: FTP-628MCL103
   b. 3 inch --- FUJITSU: FTP-628MCL103
10. The Board dimensions 60x30mm.
11. It has Two LEDs Pin outs.

## 2.0. THERMAL PRINTER ENCLOSURE:

### 2.1 Outward appearance:

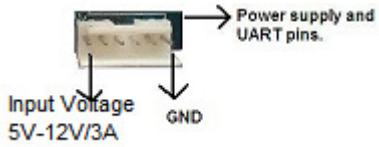
**TOPVIEW:**

**FRONT VIEW:**

### 2.2 POWER SUPPLY:

The Power supply to be used as per the Power supply Table 4.0 .The power supply connector pin is J3 in the Thermal printer Board. Details are shown in below figure.

***Note:*** Refer Power Supply Table 4.0 for input Voltage.



## 2.3 SWITCH:

**TEST PRINT SWITCH (TP):** For test print hold the TP switch and reset the main power supply and release the switch after some time.

Note: Current Baudrate will also print

## 2.4 LEDS:

Board consists of 2 LED Pin outs.

1. Red LED (LED1) is for power indication and also for platen detection indication and it will blink continuously when there is no platen present.
2. Green LED (LED2) will blink continuously while printing and also blink continuously when there is no paper present.

## 2.5 Description of UART Signals:

**RXD:**

1. Serial data input signal. Data signal to be transferred from host to printer.
2. “Space” indicates no data (=), “Mark” indicates that data exists (= 1)

3. The data format is as follows

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Start | B0 | B1 | B2 | B3 | B4 | B5 | B6 | B7 | Stop |

Length of stop bit is 1 bit fixed Data length is 8bits

fixed Parity Bits: None

Start bit is “Space” and stop bit is “Mark”

**TXD:**

1) Serial data output signal. Data signal to be transferred from printer to host.

2) Other functions are the same as RXD.

**CTS: Not Used**

**RTS:** RTS is an active low output which notifies the other device when it can receive data by driving the pin low. The External device has to scan for this pin and transmit data only when the pin is low.

RTS = logic 0, mean that the module is ready to receive data.

Note: It will work without RTS pin also.
**GND: Signal Ground.**

## 2.6 Process of loading the Thermal Printer

1. Remove the platen slowly

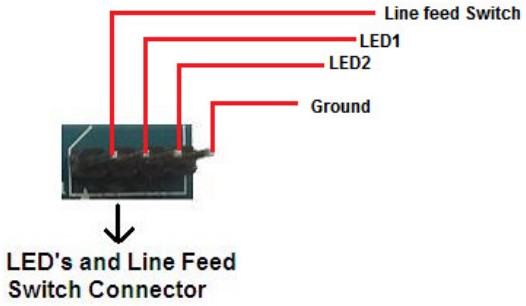
2. Replace the paper

3. Load the platen back to its position.

Note: Make sure that the platen is placed properly. After placing the platen the motor will rotate for some time and stops.

## 3.0. ON BOARD CONNECTOR DETAILS:

### 3.1. J1 CONNECTOR




This connector basically includes two LED's and a switch, the two led's RED and GREEN in color.

### 3.2. J2 CONNECTOR

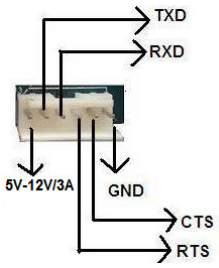
This connector is used for baud rate setting. If the connector is open the Baud rate will be 9600 and if we place a Jumper on above shown two pins the Baud rate is varied depends on customer requirement.

***Note***: After placing a jumper, reset the printer.

### 3.3. J3 CONNECTOR

This connector includes the Power pins and UART pins as shown in fig. The UART pins are just TTL Output so in order to communicate via serially you need to connect a TTL to RS232 converter in between.

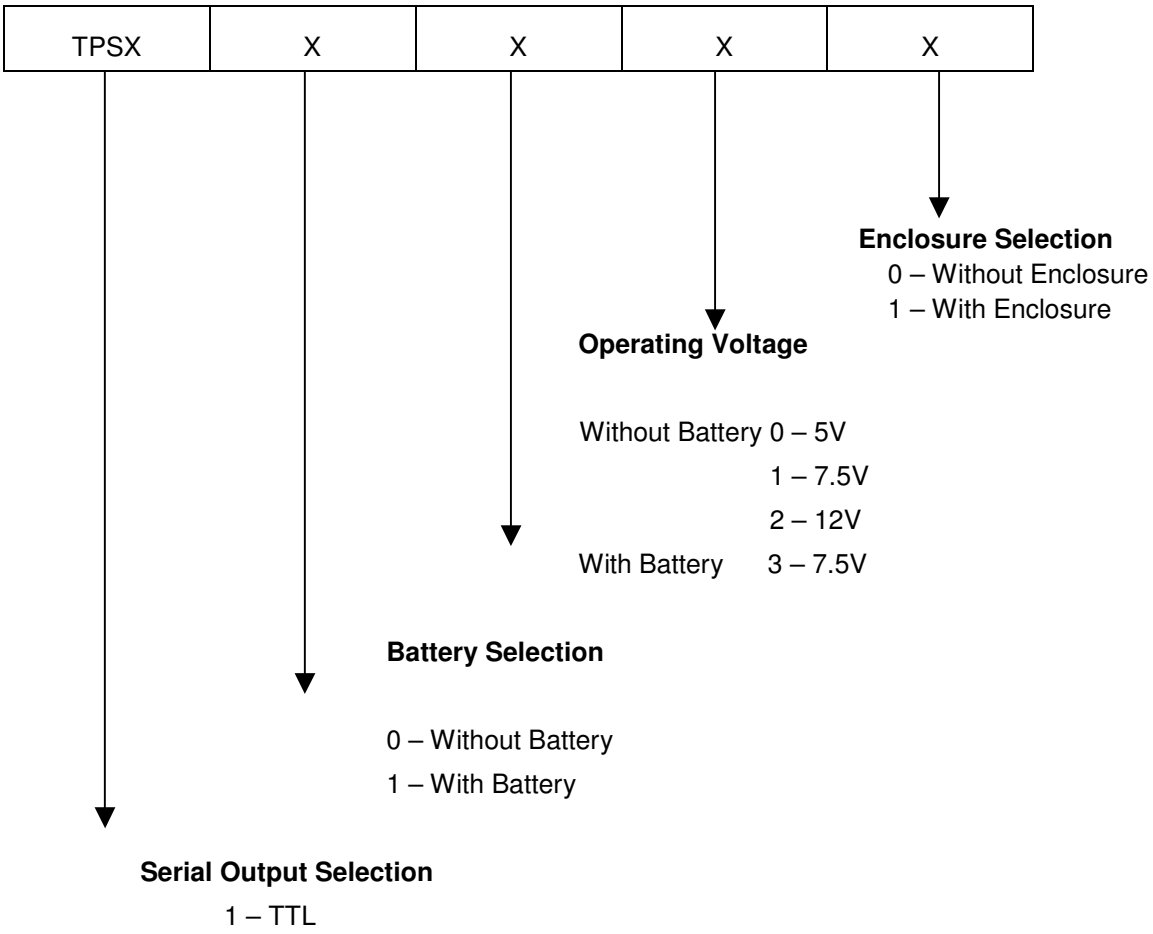
***Note:*** Refer Power Supply table 4.0 for input voltage.



## 4.0. POWER SUPPLY TABLE:

| Product Code | Voltage/Amps |
|---|---|
| TPS21001 | 5V/3A |
| TPS21011 | 7.5V/3A |
| TPS21021 | 12V/3A |

### Product Code Description:



**Selection (TPS)**

2 – 2 Inch Thermal Printer

3 – 3 Inch Thermal Printer

**For any technical discussion related to the product with our team and various users, visit and post your questions at**

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